



OICE

RAW SEQUENCE LISTING

DATE: 02/06/2002

PATENT APPLICATION: US/09/843,676

TIME: 15:48:38

Input Set : N:\Crif3\RULE60\09843676.raw

Output Set: N:\CRF3\02062002\I843676.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Cech, Thomas R.
 6 Lingner, Joachim
 7 Nakamura, Toru
 8 Chapman, Karen B.
 9 Morin, Gregg B.
 10 Harley, Calvin
 11 Andrews, William H.

13 (ii) TITLE OF INVENTION: Novel Telomerase

15 (iii) NUMBER OF SEQUENCES: 225

17 (iv) CORRESPONDENCE ADDRESS:

18 (A) ADDRESSEE: Townsend and Townsend and Crew LLP
 19 (B) STREET: Two Embarcadero Center, 8th Floor
 20 (C) CITY: San Francisco
 21 (D) STATE: California
 22 (E) COUNTRY: United States of America
 23 (F) ZIP: 94111

25 (v) COMPUTER READABLE FORM:

26 (A) MEDIUM TYPE: Floppy disk
 27 (B) COMPUTER: IBM PC compatible
 28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 29 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

31 (vi) CURRENT APPLICATION DATA:

C--> 32 (A) APPLICATION NUMBER: US/09/843,676
 C--> 33 (B) FILING DATE: 26-Apr-2001
 54 (C) CLASSIFICATION: 536

51 (vii) PRIOR APPLICATION DATA:

37 (A) APPLICATION NUMBER: US/08/854,050
 38 (B) FILING DATE: 09-MAY-1997
 42 (A) APPLICATION NUMBER: US 08/846,017
 43 (B) FILING DATE: 25-APR-1997
 47 (A) APPLICATION NUMBER: US 08/844,419
 48 (B) FILING DATE: 18-APR-1997
 52 (A) APPLICATION NUMBER: US 08/724,643
 53 (B) FILING DATE: 01-OCT-1996

56 (viii) ATTORNEY/AGENT INFORMATION:

57 (A) NAME: Apple, Randolph T.
 58 (B) REGISTRATION NUMBER: 36,429
 59 (C) REFERENCE/DOCKET NUMBER: 015389-002930US

61 (ix) TELECOMMUNICATION INFORMATION:

62 (A) TELEPHONE: (415) 576-0200
 63 (B) TELEFAX: (415) 576-0300

ENTERED

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Input Set : N:\Crif3\RULE60\09843676.raw

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65 (2) INFORMATION FOR SEQ ID NO: 1:

67 (i) SEQUENCE CHARACTERISTICS:

68 (A) LENGTH: 3279 base pairs

69 (B) TYPE: nucleic acid

70 (C) STRANDEDNESS: single

71 (D) TOPOLOGY: linear

73 (ii) MOLECULE TYPE: other nucleic acid

74 (A) DESCRIPTION: /desc = "DNA"

76 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

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80	TTAATAAGCT CAGATTTTAA ATATTAATTA CAAAACCTAA ATGGAGGTTG ATGTTGATAA	120
82	TCAAGCTGAT AATCATGGCA TTCCTCAGC TCTTAAGACT TGTGAAGAAA TTAAAGAAGC	180
84	TAAAACGTTG TACTCTTGA TCCAGAAAGT TATTAGATGA AGAAATCAAT CTCAAAGTCA	240
86	TTATAAAGAT TTAGAAGATA TTAAAATATT TGCGCAGACA AATATTGTTG CTACTCCACG	300
88	AGACTATAAT GAAGAAGATT TTAAAGTTAT TGCAAGAAAA GAAGTATTTT CAACTGGACT	360
90	AATGATCGAA CTTATTGACA AATGCTTAGT TGAACCTCTT TCATCAAGCG ATGTTTCAGA	420
92	TAGACAAAAA CTTCAATGAT TTGGATTTCA ACTTAAGGGA AATCAATTAG CAAAGACCCA	480
94	TTTATTAACA GCTCTTTCAA CTCAAAGCA GTATTTCTTT CAAGACGAAT GGAACCAAGT	540
96	TAGAGCAATG ATTGGAAATG AGCTCTTCCG ACATCTCTAC ACTAAATATT TAATATTCCA	600
98	GCGAACTTCT GAAGGAACTC TTGTTCAATT TTGCGGGAAT AACGTTTTTG ATCATTTGAA	660
100	AGTCAACGAT AAGTTTGACA AAAAGCAAAA AGGTGGAGCA GCAGACATGA ATGAACCTCG	720
102	ATGTTGATCA ACCTGCAAAAT ACAATGTCAA GAATGAGAAA GATCACTTTC TCAACAACAT	780
104	CAACGTGCCG AATTGGAATA ATATGAAATC AAGAACCAGA ATATTTTATT GCACTCATTT	840
106	TAATAGAAAT AACCAATTCT TCAAAAAGCA TGAGTTTGTG AGTAACAAAA ACAATATTTT	900
108	AGCGATGGAC AGAGCTCAGA CGATATTCAC GAATATATTC AGATTTAATA GAATTAGAAA	960
110	GAAGCTAAAA GATAAGGTTA TCGAAAAAAT TGCCTACATG CTTGAGAAAG TCAAAGATTT	1020
112	TAACTTCAAC TACTATTTAA CAAAATCTTG TCCTCTTCCA GAAAATTGGC GGAACGGAA	1080
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118	CAATATACTC CCCAAAGACT TTTTGACTGG AAGAAACCGT AAGAATTTTC AAAAGAAAGT	1260
120	TAAGAAATAT GTGGAATAA ACAAGCATGA ACTCATTAC AAAAATTAT TGCTTGAGAA	1320
122	GATCAATACA AGAGAAATAT CATGGATGCA GGTTGAGACC TCTGCAAAGC ATTTTATTA	1380
124	TTTTGATCAC GAAAACATCT ACGTCTTATG GAAATTGCTC CGATGGATAT TCGAGGATCT	1440
126	CGTCGTCTCG CTGATTAGAT GATTTTCTA TGTCACCGAG CAACAGAAAA GTTACTCCAA	1500
128	AACCTATTAC TACAGAAAGA ATATTTGGGA CGTCATTATG AAAATGTCAA TCGCAGACTT	1560
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132	TGGATTGCA CCTGGAAGAA TCAGACTAAT ACCGAAGAAA ACTACTTTCC GTCCAATTAT	1680
134	GACTTCAAT AAGAAGATTG TAAATTCAGA CCGGAAGACT ACAAATTA CTACAAATAC	1740
136	GAAGTTATTG AACTCTCACT TAATGCTTAA GACATTGAAG AATAGAATGT TTAAAGATCC	1800
138	TTTTGGATTG GCTGTTTTTA ACTATGATGA TGTAATGAAA AAGTATGAGG AGTTTGTTTG	1860
140	CAAAATGGAAG CAAGTTGGAC AACCAAAACT CTTCTTTGCA ACTATGGATA TCGAAAAGTG	1920
142	ATATGATAGT GTAAACAGAG AAAAATATC AACATTCTTA AAACTACTA AATTACTTTC	1980
144	TTGAGATTTC TGGATTATGA CTGCACAAAT TCTAAAGAGA AAGAATAACA TAGTTATCGA	2040
146	TTGAGAAAAC TTTAGAAAGA AAGAAATGAA AGATTATTTT AGACAGAAAT TCCAGAAGAT	2100
148	TGCACTTGAA GGAGGACAAT ATCCAACCTT ATTCAGTGTT CTTGAAAATG AACAAAATGA	2160
150	CTTAAATGCA AAGAAAACAT TAATTGTTGA AGCAAAGCAA AGAAATTATT TTAAGAAAGA	2220
152	TAACTTACTT CAACCAAGTCA TTAATATTTG CCAATATAAT TACATTAAC TTAATGGGAA	2280
154	GTTTTATATA CAAACAAAAG GAATTCCTCA AGGTCTTTGA GTTTCATCAA TTTTGTCATC	2340
156	ATTTTATTAT GCAACATTAG AGGAAAGCTC CTTAGGATTC CTTAGAGATG AATCAATGAA	2400

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158 CCCTGAAAT CCAAATGTTA ATCTTCTAAT GAGACTTACA GATGACTATC TTTTGATTAC 2460
160 AACTCAAGAG AATAATGCAG TATTGTTTAT TGAGAAACTT ATAAACGTAA GTCGTGAAAA 2520
162 TGGATTTAAA TTCAATATGA AGAAACTACA GACTAGTTTT CCATTAAGTC CAAGCAAATT 2580
164 TGCAAAATAC GGAATGGATA GTGTTGAGGA GCAAAATATT GTTCAAGATT ACTGCGATTG 2640
166 GATTGGCATC TCAATTGATA TGAAAACTCT TGCTTTAATG CCAAATATTA ACTTGAGAAT 2700
168 AGAAGGAATT CTGTGTACAC TCAATCTAAA CATGCAAACA AAGAAAGCAT CAATGTGGCT 2760
170 CAAGAAGAAA CTAAGTCGT TTTTAATGAA TAACATTACC CATTATTTTA GAAAGACGAT 2820
172 TACAACCGAA GACTTTGCGA ATAAACTCT CAACAAGTTA TTTATATCAG GCGGTTACAA 2880
174 ATACATGCAA TGAGCCAAAG AATACAAGGA CCACTTTAAG AAGAACTTAG CTATGAGCAG 2940
176 TATGATCGAC TTAGAGGTAT CTAAAATTAT ATACTCTGTA ACCAGAGCAT TCTTTAAATA 3000
178 CCTTGTGTGC AATATTAAGG ATACAATTTT TGGAGAGGAG CATTATCCAG ACTTTTTCCT 3060
180 TAGCACACTG AAGCACTTTA TTGAAATATT CAGCACAAAA AAGTACATTT TCAACAGAGT 3120
182 TTGCATGATC CTCAAGGCAA AAGAAGCAAA GCTAAAAAGT GACCAATGTC AATCTCTAAT 3180
184 TCAATATGAT GCATAGTCGA CTATTCTAAC TTATTTTGGG AAGTTAATTT TCAATTTTGG 3240
186 TCTTATATAC TGGGGTTTTG GGGTTTTGGG GTTTTGGGG 3279

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188 (2) INFORMATION FOR SEQ ID NO: 2:

190 (i) SEQUENCE CHARACTERISTICS:

191 (A) LENGTH: 1031 amino acids

192 (B) TYPE: amino acid

193 (C) STRANDEDNESS: Not Relevant

W--> 194 (D) TOPOLOGY: Not Relevant

196 (ii) MOLECULE TYPE: protein

198 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

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200 Met Glu Val Asp Val Asp Asn Gln Ala Asp Asn His Gly Ile His Ser
201 1 5 10 15
203 Ala Leu Lys Thr Cys Glu Glu Ile Lys Glu Ala Lys Thr Leu Tyr Ser
204 20 25 30
206 Trp Ile Gln Lys Val Ile Arg Cys Arg Asn Gln Ser Gln Ser His Tyr
207 35 40 45
209 Lys Asp Leu Glu Asp Ile Lys Ile Phe Ala Gln Thr Asn Ile Val Ala
210 50 55 60
212 Thr Pro Arg Asp Tyr Asn Glu Glu Asp Phe Lys Val Ile Ala Arg Lys
213 65 70 75 80
215 Glu Val Phe Ser Thr Gly Leu Met Ile Glu Leu Ile Asp Lys Cys Leu
216 85 90 95
218 Val Glu Leu Leu Ser Ser Ser Asp Val Ser Asp Arg Gln Lys Leu Gln
219 100 105 110
221 Cys Phe Gly Phe Gln Leu Lys Gly Asn Gln Leu Ala Lys Thr His Leu
222 115 120 125
224 Leu Thr Ala Leu Ser Thr Gln Lys Gln Tyr Phe Phe Gln Asp Glu Trp
225 130 135 140
227 Asn Gln Val Arg Ala Met Ile Gly Asn Glu Leu Phe Arg His Leu Tyr
228 145 150 155 160
230 Thr Lys Tyr Leu Ile Phe Gln Arg Thr Ser Glu Gly Thr Leu Val Gln
231 165 170 175
233 Phe Cys Gly Asn Asn Val Phe Asp His Leu Lys Val Asn Asp Lys Phe
234 180 185 190
236 Asp Lys Lys Gln Lys Gly Gly Ala Ala Asp Met Asn Glu Pro Arg Cys
237 195 200 205

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239	Cys	Ser	Thr	Cys	Lys	Tyr	Asn	Val	Lys	Asn	Glu	Lys	Asp	His	Phe	Leu
240		210					215					220				
242	Asn	Asn	Ile	Asn	Val	Pro	Asn	Trp	Asn	Asn	Met	Lys	Ser	Arg	Thr	Arg
243	225					230					235					240
245	Ile	Phe	Tyr	Cys	Thr	His	Phe	Asn	Arg	Asn	Asn	Gln	Phe	Phe	Lys	Lys
246					245					250					255	
248	His	Glu	Phe	Val	Ser	Asn	Lys	Asn	Asn	Ile	Ser	Ala	Met	Asp	Arg	Ala
249				260					265					270		
251	Gln	Thr	Ile	Phe	Thr	Asn	Ile	Phe	Arg	Phe	Asn	Arg	Ile	Arg	Lys	Lys
252			275					280					285			
254	Leu	Lys	Asp	Lys	Val	Ile	Glu	Lys	Ile	Ala	Tyr	Met	Leu	Glu	Lys	Val
255		290					295					300				
257	Lys	Asp	Phe	Asn	Phe	Asn	Tyr	Tyr	Leu	Thr	Lys	Ser	Cys	Pro	Leu	Pro
258	305					310					315					320
260	Glu	Asn	Trp	Arg	Glu	Arg	Lys	Gln	Lys	Ile	Glu	Asn	Leu	Ile	Asn	Lys
261					325					330					335	
263	Thr	Arg	Glu	Glu	Lys	Ser	Lys	Tyr	Tyr	Glu	Glu	Leu	Phe	Ser	Tyr	Thr
264				340					345					350		
266	Thr	Asp	Asn	Lys	Cys	Val	Thr	Gln	Phe	Ile	Asn	Glu	Phe	Phe	Tyr	Asn
267			355					360					365			
269	Ile	Leu	Pro	Lys	Asp	Phe	Leu	Thr	Gly	Arg	Asn	Arg	Lys	Asn	Phe	Gln
270		370					375					380				
272	Lys	Lys	Val	Lys	Lys	Tyr	Val	Glu	Leu	Asn	Lys	His	Glu	Leu	Ile	His
273	385					390					395					400
275	Lys	Asn	Leu	Leu	Leu	Glu	Lys	Ile	Asn	Thr	Arg	Glu	Ile	Ser	Trp	Met
276				405						410					415	
278	Gln	Val	Glu	Thr	Ser	Ala	Lys	His	Phe	Tyr	Tyr	Phe	Asp	His	Glu	Asn
279				420					425				430			
281	Ile	Tyr	Val	Leu	Trp	Lys	Leu	Leu	Arg	Trp	Ile	Phe	Glu	Asp	Leu	Val
282			435					440					445			
284	Val	Ser	Leu	Ile	Arg	Cys	Phe	Phe	Tyr	Val	Thr	Glu	Gln	Gln	Lys	Ser
285		450					455					460				
287	Tyr	Ser	Lys	Thr	Tyr	Tyr	Tyr	Arg	Lys	Asn	Ile	Trp	Asp	Val	Ile	Met
288	465				470						475				480	
290	Lys	Met	Ser	Ile	Ala	Asp	Leu	Lys	Lys	Glu	Thr	Leu	Ala	Glu	Val	Gln
291				485						490					495	
293	Glu	Lys	Glu	Val	Glu	Glu	Trp	Lys	Lys	Ser	Leu	Gly	Phe	Ala	Pro	Gly
294				500					505					510		
296	Lys	Leu	Arg	Leu	Ile	Pro	Lys	Lys	Thr	Thr	Phe	Arg	Pro	Ile	Met	Thr
297			515					520					525			
299	Phe	Asn	Lys	Lys	Ile	Val	Asn	Ser	Asp	Arg	Lys	Thr	Thr	Lys	Leu	Thr
300		530					535					540				
302	Thr	Asn	Thr	Lys	Leu	Leu	Asn	Ser	His	Leu	Met	Leu	Lys	Thr	Leu	Lys
303	545					550					555					560
305	Asn	Arg	Met	Phe	Lys	Asp	Pro	Phe	Gly	Phe	Ala	Val	Phe	Asn	Tyr	Asp
306				565						570					575	
308	Asp	Val	Met	Lys	Lys	Tyr	Glu	Glu	Phe	Val	Cys	Lys	Trp	Lys	Gln	Val
309				580					585					590		
311	Gly	Gln	Pro	Lys	Leu	Phe	Phe	Ala	Thr	Met	Asp	Ile	Glu	Lys	Cys	Tyr

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312		595		600		605													
314	Asp	Ser	Val	Asn	Arg	Glu	Lys	Leu	Ser	Thr	Phe	Leu	Lys	Thr	Thr	Lys			
315		610					615					620							
317	Leu	Leu	Ser	Ser	Asp	Phe	Trp	Ile	Met	Thr	Ala	Gln	Ile	Leu	Lys	Arg			
318		625				630					635					640			
320	Lys	Asn	Asn	Ile	Val	Ile	Asp	Ser	Lys	Asn	Phe	Arg	Lys	Lys	Glu	Met			
321					645					650					655				
323	Lys	Asp	Tyr	Phe	Arg	Gln	Lys	Phe	Gln	Lys	Ile	Ala	Leu	Glu	Gly	Gly			
324			660						665				670						
326	Gln	Tyr	Pro	Thr	Leu	Phe	Ser	Val	Leu	Glu	Asn	Glu	Gln	Asn	Asp	Leu			
327		675						680			685								
329	Asn	Ala	Lys	Lys	Thr	Leu	Ile	Val	Glu	Ala	Lys	Gln	Arg	Asn	Tyr	Phe			
330		690					695				700								
332	Lys	Lys	Asp	Asn	Leu	Leu	Gln	Pro	Val	Ile	Asn	Ile	Cys	Gln	Tyr	Asn			
333		705				710				715					720				
335	Tyr	Ile	Asn	Phe	Asn	Gly	Lys	Phe	Tyr	Lys	Gln	Thr	Lys	Gly	Ile	Pro			
336				725					730					735					
338	Gln	Gly	Leu	Cys	Val	Ser	Ser	Ile	Leu	Ser	Ser	Phe	Tyr	Tyr	Ala	Thr			
339			740						745				750						
341	Leu	Glu	Glu	Ser	Ser	Leu	Gly	Phe	Leu	Arg	Asp	Glu	Ser	Met	Asn	Pro			
342		755					760				765								
344	Glu	Asn	Pro	Asn	Val	Asn	Leu	Met	Arg	Leu	Thr	Asp	Asp	Tyr	Leu				
345		770				775				780									
347	Leu	Ile	Thr	Thr	Gln	Glu	Asn	Asn	Ala	Val	Leu	Phe	Ile	Glu	Lys	Leu			
348		785				790				795					800				
350	Ile	Asn	Val	Ser	Arg	Glu	Asn	Gly	Phe	Lys	Phe	Asn	Met	Lys	Lys	Leu			
351				805					810					815					
353	Gln	Thr	Ser	Phe	Pro	Leu	Ser	Pro	Ser	Lys	Phe	Ala	Lys	Tyr	Gly	Met			
354			820					825					830						
356	Asp	Ser	Val	Glu	Glu	Gln	Asn	Ile	Val	Gln	Asp	Tyr	Cys	Asp	Trp	Ile			
357		835					840				845								
359	Gly	Ile	Ser	Ile	Asp	Met	Lys	Thr	Leu	Ala	Leu	Met	Pro	Asn	Ile	Asn			
360		850				855			860										
362	Leu	Arg	Ile	Glu	Gly	Ile	Leu	Cys	Thr	Leu	Asn	Leu	Asn	Met	Gln	Thr			
363		865				870			875						880				
365	Lys	Lys	Ala	Ser	Met	Trp	Leu	Lys	Lys	Lys	Leu	Lys	Ser	Phe	Leu	Met			
366				885					890					895					
368	Asn	Asn	Ile	Thr	His	Tyr	Phe	Arg	Lys	Thr	Ile	Thr	Thr	Glu	Asp	Phe			
369			900					905					910						
371	Ala	Asn	Lys	Thr	Leu	Asn	Lys	Leu	Phe	Ile	Ser	Gly	Gly	Tyr	Lys	Tyr			
372			915					920				925							
374	Met	Gln	Cys	Ala	Lys	Glu	Tyr	Lys	Asp	His	Phe	Lys	Lys	Asn	Leu	Ala			
375		930					935				940								
377	Met	Ser	Ser	Met	Ile	Asp	Leu	Glu	Val	Ser	Lys	Ile	Ile	Tyr	Ser	Val			
378		945				950				955					960				
380	Thr	Arg	Ala	Phe	Phe	Lys	Tyr	Leu	Val	Cys	Asn	Ile	Lys	Asp	Thr	Ile			
381				965					970				975						
383	Phe	Gly	Glu	Glu	His	Tyr	Pro	Asp	Phe	Phe	Leu	Ser	Thr	Leu	Lys	His			
384				980				985					990						

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L:33 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
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L:3800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71
L:3811 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=72
L:3838 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73
L:3849 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=74
L:3877 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75
L:3888 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=76
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Output Set: N:\CRF3\02062002\I843676.raw

L:4478 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=93
L:4494 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=94
L:4510 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=95
L:4526 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=96
L:4542 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=97
L:4558 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=98
L:4574 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=99
L:4717 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101
L:4815 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=102
L:4831 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=103
L:4846 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=104
L:6621 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6630 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6642 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6645 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6648 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174
L:6706 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:176
L:6725 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:177
L:6728 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:177
L:6924 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:185
L:7297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:202
L:7300 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:202
L:7303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:202
L:7315 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:202
L:7318 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:202
L:7324 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:202
L:7365 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:203
L:7368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:203
L:7490 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:206
L:7743 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:215
L:7746 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:215
L:7763 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:216
L:7766 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:216
L:7791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217
L:7794 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217
L:7797 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217
L:7800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217
L:7827 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217
L:7830 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217
L:7833 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217
L:7908 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217